

## REMARKS

Claims 1, 4, 7, 10-22, 26-34 and 55-59 are pending. Claims 2, 3, 5, 6, 8, 9, 23-25 and 35-54 are canceled. Claims 55-59 are new.

1. Claims 1, 4, 10-12, 15, 17-22, 24, 26, 27, 29, and 31-34 were rejected under 35 USC §102(b) as anticipated by or, in the alternative, under 35 USC §103(a) as obvious over Elsik et al. (US 5,550,180, hereinafter “Elsik”). Applicants respectfully traverse this rejection.

Claim 1 is directed to a surface coating solution including a water-based solution including a polymer and an emulsion. The surface coating solution also includes activated boehmite particles provided in the water-based solution in an amount of 0.1 wt% to 20 wt%. The activated boehmite particles include mainly anisotropically shaped particles having an aspect ratio of at least 3:1. The surface coating solution has flow and leveling of at least 6 and a sag resistance of at least 7 mils. The surface coating solution is free of associative thickener.

Claim 22 is directed to a surface coating solution including a latex emulsion and activated boehmite particles in an amount 0.1 wt% and 20 wt%. The activated boehmite particles include mainly anisotropically shaped particles having an aspect ratio of at least 3:1 and a longest dimension of at least 50 nanometers. The surface coating solution has flow and leveling of at least 6 and a sag resistance of at least 7 mils. The surface coating solution is free of an associative thickener.

Elsik is directed to a latex composition comprising, as a rheology modifier, an amount of boehmite alumina having a crystal size of less than 60 Angstroms and a surface area when calcined to a gamma phase, of greater than approximately 200 m<sup>2</sup>/g. (Elsik, Abstract). In ascertaining the dimensions of the boehmite alumina, the PTO appears to have confused crystallite size with particle size. Please note that Applicant's claims refer to particle dimensions. In Example 1, Elsik discloses a latex paint formulation including Dispersal P2, described as a water dispersible boehmite alumina marketed by Condea Chemie G.M.B.H., in an amount of approximately 0.72 wt %. Elsik is silent regarding the sag resistance and flow and leveling characteristics of this formula. As such, Elsik fails to explicitly disclose a latex formulation having a sag resistance of at least 7 mils and a flow and leveling of at least 6.

Further, Elsik fails to inherently teach or suggest a latex formulation having the claimed sag resistance and flow and leveling properties. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. (See MPEP 2112).

In any even, as explained by Dr. Doruk Yener in the attached Declaration on January 21, 2009, experiments demonstrate that acrylic latex formulations that include Dispersal P2, whether activated or unactivated, fail to exhibit the claimed flow and leveling and sag resistance properties. In fact, each of the disclosed commercially available boehmite particulates, when used as rheology modifiers in a latex composition in amounts approximately that disclosed by Elsik, failed to exhibit the claimed sag resistance and flow and leveling properties. Accordingly, such properties are clearly not inherent to those formulations of Elsik that are free of associative thickener.

In contrast, claim 1 recites a surface coating solution that is free of associative thickener and has flow and leveling of at least 6 and a sag resistance of at least 7 mils. Similarly, claim 22 is directed to a surface coating solution having a flow and leveling of at least 6 and a sag resistance of at least 7 mils that is free of an associative thickener. Elsik fails to teach or suggest, explicitly or inherently, each of the claimed features.

For at least the foregoing reasons, claims 1, 4, 10-12, 15, 17-22, 24, 26, 27, 29, and 31-34 are patentable over Elsik. As such, Applicants respectfully request reconsideration and withdrawal of the 35 USC §102(b) and 35 USC §103(a) rejections.

2. Claims 1, 4, 7, 10-22, 24, and 26-34 were rejected under 35 USC §103(a) as being obvious over Elsik in view of Bugosh (US 2,915,475, hereinafter “Bugosh”), and in view of Gernon et al. (US 2006/0106129 A1, hereinafter “Gernon ‘129”). Applicants respectfully traverse this rejection.

As described above, Elsik fails to teach or suggest, explicitly or inherently, a latex formulation that is free of associative thickener and has the claimed sag resistance and flow and leveling properties. Accordingly, the PTO turns to Bugosh, relying on Bugosh for the use of high aspect ratio boehmite in aqueous solutions. Bugosh further discloses that fibrous boehmite can be used as reinforcing filler in making plastic films, coatings, paints, adhesives, or other plastic articles. The fibrous boehmite may be mixed with aqueous dispersions of polymers. (Bugosh, col. 29, ll. 1-21). Bugosh is silent regarding composition of the coatings and paints and is silent regarding characteristics of the coatings and paints, such as flow and leveling, sag resistance, and set-to-touch dry time characteristics. While, as disclosed by Bugosh, it may have been known to incorporate boehmite into coatings, paints, and adhesives, Bugosh is silent regarding activating the boehmite particulate and is silent regarding the process for forming aqueous dispersions of polymers. Accordingly, Bugosh and a combination of Elsik and Bugosh do not disclose a latex formulation that necessarily, and thus, inherently has the claims thixotropic properties.

In addition, the PTO turns to Gernon '129, which discloses latex paint formulations that contain N-n-butyl ethanolamine (BAE) as a neutralizing agent. Gernon '129 discloses a flat interior paint that includes a Polyphobe 102 rheology modifier and other coatings that include RHOPLEX® or Acrysol® rheology modifiers. The flat interior paint reportedly exhibits a leveling of 8. Gernon '129 does not disclose the use of a boehmite rheology modifier and is silent regarding the sag resistance of the paint formulations. In particular, the PTO relies on Gernon '129 for the pH of commercial latex paint, the set dry time, the viscosity, and leveling of commercial latex paints. The PTO states that Gernon '129 is cited to show pH, set-to-touch dry time, and viscosity of commercial paints, not for thickeners.

In the experiments illustrated in the attached Declaration of Dr. Yener, Applicants clearly demonstrate that sag resistance, flow and leveling, viscosity, and other properties including set-to-touch dry times, are influenced by the use of boehmite thickeners. As demonstrated by the examples provided in the attached Declaration, the properties of Gernon '129 are not inherent to the compositions of Elsik, particularly in absence of associative thickeners used in both Elsik and Gernon '129. Moreover, Dr. Yener explains in his Declaration that not all latex formulations, even those that include activated anisotropically shaped boehmite, necessarily have the claimed

flow and leveling and sag resistant properties. Accordingly, the PTO cannot attribute the properties of Gernon '129 to the compositions of Elsik, particularly with the addition of the boehmite particulate of Bugosh.

Moreover, inherency cannot be asserted when a combination of factors, each from a different reference, influences the claim property. In this case, the PTO is asserting that the boehmite particulate of Bugosh in the formulation of Elsik, with the pH and other properties of Gernon '129, would have the claimed sag resistance and flow and leveling properties. Each of the boehmite of Bugosh, the amount of such boehmite disclosed in Elsik, and the pH and other conditions of Gernon '129 influence the flow and leveling and sag resistance of the surface coating solution. Clearly, the combination does not necessarily have the claimed properties. In this regard, the PTO's proposed combination is clearly deficient and fails to establish a *prima facie* case of obviousness.

In contrast, claim 1 and claim 22 recite surface coating solutions that are free of associative thickener and have flow and leveling of at least 6 and a sag resistance of at least 7 mils. While Gernon '129 discloses leveling characteristics of 8, such characteristics are in the context of a latex formulation that includes associative thickeners. Absent associative thickener, the leveling properties of the paint would clearly be altered. As further demonstrated by the experiments illustrated in the attached Declaration by Dr. Yener, the commercially available boehmite particulate disclosed by Elsik does not necessarily provide latex formulation having the claimed properties. As additionally demonstrated, even with the inclusion of activated anisotropic shaped boehmite particulate, latex paint formulations do not necessarily have the claimed properties. Accordingly, any assertion that the proposed combination necessarily and thus, inherently has the claimed properties is erroneous.

For at least the foregoing reasons, claims 1, 4, 7, 10-12, 24, and 26-34 are patentable over Elsik in view of Bugosh and in view of Gernon '129. As such, applicants respectfully request reconsideration and withdrawal of the 35 USC §103(a) rejection.

3. Claims 1, 4, 7, 10-22, 24, and 26-34 were rejected under 35 USC §103(a) as being obvious over Bugosh and Gernon '129. Applicants respectfully traverse this rejection.

While it is unclear whether the PTO is proposing the substitution of the particulate of Bugosh for the associative thickener of Gernon '129 or alternatively, the PTO is proposing the addition of the particulate of Bugosh to the formulation of Gernon '129, Applicants have clearly demonstrated that the claimed properties are not necessarily present and thus not inherently present in latex formulations that include anisotropically shaped boehmite particulate.

For at least the foregoing reasons, claims 1, 4, 7, 10-22, 24, and 26-34 patentable over Bugosh and Gernon. As such, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. 103(a) rejection.

4. While the PTO states that the rejections based on Yoshino et al. and Napier are withdrawn since they are redundant with respect to Bugosh, Applicants respectfully submit that the present claims are patentable over both Yoshino et al. and Napier.

5. Claims 55-59 are new and derive support from the originally filed specification. Claims 55-59 are patentable over the cited references.

Applicant(s) respectfully submit that the present application is now in condition for allowance. Accordingly, the Examiner is requested to issue a Notice of Allowance for all pending claims.

Should the Examiner deem that any further action by the Applicants would be desirable for placing this application in even better condition for issue, the Examiner is requested to telephone Applicants' undersigned representative at the number listed below.

The Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 50-3797.

Respectfully submitted,

2/10/2009

/john r. schell/

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